

1st International Conference Earth Science and Energy



Book of Program

“Renewable Energy for Environmental Sustainability”

Held on 7th - 8th November 2019

at Society M, CitizenM Hotel, Bukit Bintang, Kuala Lumpur, Malaysia



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Preface

We are delighted to introduce the *1st International Conference Earth Science And Energy* with theme “Renewable Energy for Environmental Sustainability”. The technical program has brought researchers and practitioners around the world to a good forum for discussing, leveraging and developing all scientific and technological aspects that are relevant to renewable energy. Moreover, it is with a great pleasure to have the keynote and invited speakers of ICESE 2019, Assoc. Prof. Ahmad Fudholi, and Dr. Prantasi Harni Tjahjanti who will share their knowledge and best innovative research findings in energy and earth science. This conference is held by Kresna Nusantara, a company that dedicated to maximize impact of scientific publication, and Relawan Jurnal Indonesia, a non-profit organization in field of scientific publication. Location of this conference is at SocietyM, CitizenM Hotel, Bukit Bintang, Malaysia, on November 7-8, 2019. This conferences was successfully acquire 60 participant from 3 conutries, Indonesia, Malaysia, and Thailand. Thus, all selected papers will be submitted for publication to our publishing partner IOP Conference Series: Earth and Environmental Science (EES). We hope that the future ICESE 2019 will be as successful and stimulating, as indicated with the contributions presented in this volume.

Kuala Lumpur, November 7, 2019
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RUNDOWN

Thursday, 7 November, 2019	
07:30-08:00	Registration
08:00-08:25	Opening Ceremony and Welcoming Speech
08:25-09:15	Chairman Report and Paper Selection for Journal Criteria
09:15-11:30	Keynote and Invited Speaker Speech
11:30-12:30	Lunch
12:30-15:30	Oral Presentation
15:30-16:00	Closing and Announcement for the Best presenters and Papers.
Workshop (only for workshop registrant)	
16:00-17:30	How to fund your research in Malaysia
17:30-18:30	Dinner and pray
18:30-21:00	How to get published in Q1 journal. (Highlight your finding, and manage your data)
Friday, 8 November, 2019	
08:00-10:00	Closing Ceremony

PRESENTATION SCHEDULE

ORAL PRESENTATION			
Link for all presentation: https://zenodo.org/communities/icese2019			
ID	Presenter	Title	Time
RJI-1-0061	Albiyan Wanda Syauqi	Design Of Pothole Detector Using Gray Level Co-Occurrence Matrix (Glc _m) And Neural Network (Nn)	12:30
RJI-1-0056	Rafidan Maulana Sudibyo	Design Of Coal Handling System For Filling Bunker Using Pid Method In Coal Pltu	12:40
RJI-1-0054	Budi Prasoj	Pipeline Corrosion Protection Simulation Of Cathodic Protection Method Againts Electrochemical Potential Distribution.	12:50
RJI-1-0063	Imam Sutrisno	Vibration Analysis Of Ship-Ruv Structure In Operational Conditions	13:00
RJI-1-0048	Septian Wahyu Saputra	Detection Of Oil And Filter Feasibility In Ship Gearbox With Svm (Support Vector Machine) Method Based On Microcontroller	13:10
RJI-1-110	Arasy Fahrudin	Experimental Study Of Blade Angle Effect On Two-Stage Vertical Shaft Hydrofoil Water Turbines On Power And Efficiency	13:20
RJI-1-111	Prantasi Harmi Tjahjanti	Study Of Crack Connections In Materials Composite Based On Polymer	13:30
RJI-1-0057	Rahmi Karolina	Compressive And Tensile Strength Of Bamboo Species	13:40
RJI-1-0057	Rahmi Karolina	Crack Patterns Analysis On Structural Beam With Slag Cement	13:50
RJI-1-0057	Rahmi Karolina	Shear Behavior Due To Pushover Static Load On Brick Masonry Of Interlock Concrete With The Substitution Of Mount Sinabung Volcanic Ash And With Rebar Reinforcement	14:00
RJI-1-0015	Siti Mutrofin	Application Of A Combination Between Principal Component Analysis And Logistic Regression Based On Support Vector Machine On Educational Data Mining With Overlapping Data Problem	14:10
RJI-1-0019	ELFIZAR	Preserving Riau'S Malay Culture Through Virtual Environment Application	14:20
RJI-1-0021	ELFRIDA RATNAWATI	The Importance Of Railroad Doorstop As A Safety Rule: An Overview Of Responsibilities	14:30
RJI-1-0028	Ida Munfarida	Effects Of Land Use On Sedimentation Rates At Cimanuk Watershed, West Java	14:40
RJI-1-0018	Mukhoirotin	The Investigation Of Il-1 B And Oxytocin Levels Among Teenager With Primary Dysmenorrhea	14:50
RJI-1-0036	Hariyadi	The Influence Of Information Technology And Communication Advancement Especially Smartphone On Muhammadiyah University Of West Sumatera	15:00
RJI-1-108	Jamaaluddin Jamaaluddin	Time Difference Calculation Settings For Very Short Term Electric Load Forecasting Using Interval Type-1 Fuzzy Inference System (It-1 Fis)	15:10
RJI-1-0051	Hanifah Ihsaniyati	Strategy Of Improving The Farmers' Adoption To Temanggung Robusta Coffee'S Geographical Indication Standard	15:20
RJI-1-107	Ribangun Bamban Jakaria	Product Design : Minimize Negative Sustainability Impacts ?	15:30

POSTER PRESENTATION

Link for all posters: <https://zenodo.org/communities/icese2019>

ID	Presenter	Title
RJI-1-0062	Uwes Fatoni	Augmented Reality Using Natural Feature Tracking (Nft) Method For Learning Media Of Makharijul Huruf
RJI-1-0062	Uwes Fatoni	Implementation Of K-Means Algorithm In Clustering Al-Quran Verses Based On Pillars Of Islam And Articles Of Faith
RJI-1-100	Yulian Findawati	lot-Based Smart Home Controller Using Nodemcu Lua V3 Microcontroller And Telegram Chat Application
RJI-1-101	Arief Wisaksono	Design And Development Of Information Systems For Rank Building Motorcycle In Muhammadiyah Sidoarjo University
RJI-1-102	Akhmad Ahfas	Otomatis Spray Desinfektan Kandang Ayam Dengan Android Berbasis Arduino Uno
RJI-1-103	Syamsudduha Syahririni	Designing An Internet Of Things Smart Chicken Enclosure
RJI-1-104	Eko Agus Suprayitno	Smart Home Integrated With Internet Of Things (Iot) In The Digital Era Of Industry 4.0
RJI-1-105	Arif Senja Fitriani	Classification Using C4.5 Algorithm In Election Participation Prediction
RJI-1-106	Mochamad Alfian Rosid	Improving Text Preprocessing For Student Complaint Document Classification Using Sastrawi
RJI-1-109	Paramitha Amelia Kusumawardani	Palm Date Increase Adolescents Hemoglobin Levels
RJI-1-0047	Sinto Susilowati	A Challenge Of Inorganic Solid Waste Reduction Practices In Suburban Area
RJI-1-0013	Andrean Eka Lucianto	The Potential Of Solar Panel Implementation Towards Sustainable Affordable Housing Development
RJI-1-0009	Mohammad Galang Merdeka	Estimation Of Oil Recovery For Hydrocarbon Injection Eor Method Using A Newly-Developed Predictive Model



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The Influence of Propolis Compress on Phelebitis Score Reduction in Hospitalized Patients

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The Influence of Propolis Compress on Phlebitis Score Reduction in Hospitalized Patients

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Abstract. Phlebitis is complications of intravenous therapy. Warm compress can reduce degree of inflammation in patients with phlebitis. While propolis compress generally used to reduce the degree of dermatitis. This study aims to examine the effect of propolis compress to the score reduction of phlebitis. The study used *Quasy-experimental*. The independent variabel is propolis compress and dependent variable is phlebitis scores. The sample of the study are 10 respondents with phlebitis taken by *Non-Randomized Sampling* technique. The results showed average scores of phlebitis before treatment are an early sign of phlebitis, early stage, and moderate phlebitis stage with their respective percentage (30%). Furthemore, it's found 60% with score 0 or no phlebitis after the propolis compress treatment. Based on the test of *Paired T-Test*, there's different score between before and after propolis compress treatment that's marked by *p-value* $(0,000) < \alpha = 0,05$ Furthermore, the test result of *Independent T-Test* showed the *p-value* $(0,000) < \alpha = 0,01$. In conclusion, There's the effect of giving propolis compress to reduce the score of phlebitis. It's hoped to Paramedic's, especially nurses to perform alternative measures in handling the problem of nosocomial infections.

Keywords: Propolis Compress, Phlebitis

1. Introduction

Intravenous therapy is an important part of most therapies administered in the hospital, and is a common procedure that is given to patients who require vascular access.(1) More than 300 million IV catheter in the form of a plastic catheter or Teflon and metal needles used in hospitals in the country.(2) In connection with this IV therapy, it has identified a nursing problem frequently encountered is the occurrence of phlebitis and extravasation vein. According to Josephson, the complications most often occur as a result of IV therapy was phlebitis, an inflammation of the veins that occur as a result of unsuccessful insertion of venous contamination appliance IV and the use of hypertonic fluids are inadequate, the chemical can irritate the vein.(2)



According to surveillance data of the World Health Organization (WHO) stated that the incidence of nosocomial infections is high at 5% per year ie 9 million people from 190 million patients treated in hospitals.(3) Brigman Young University study in 2007 showed the incidence of phlebitis 5.79% of 432 patients. According to the MOH in 2006 the incidence of nosocomial infections such as phlebitis in Indonesia (17.11%).Based on a preliminary study conducted by researchers at the Hospital of Jombang Medika Unipdu there were 21 incident cases of phlebitis in the last three months commencing from January to March 2015.

The treatment is used to treat phlebitis has been the provision of Heparin Sodium ointments and compresses Alcohol.(4) Alcohol can cause skin irritation and cause dermatitis reactions were Heparin Sodium is expensive and is only prescribed for patients with upper middle income.(5) Handling phlebitis use warm compresses aims tto reduce the pain caused due to phlebitis. (6) Propolis is a substance that can heal quickly and effectively used during the war BOER as a wound healer.(7) The use of traditional medicines into one of the alternatives in the treatment of inflammatory considered to be safer in terms of side effects and toxicity.(8) Inflammatory efficacy of propolis against most still healing in general and do not use sterile techniques that can lead to cross-infection, so it is important to be investigated influence profolis compresses against the expected decrease in score phlebitis end result could improve health care in the hospital.

2. Methodology

This study uses Quasy Experimental research approach to pretest-posttest control group design. In this design the intervention group were given propolis compress action while the control group only with warm compresses action. In both groups starting with the pre-test and after the administration of the treatment in the experimental and control groups, conducted back in the post-test. The population in this study are allinpatients at the hospital. Medika Unipdu Jombang numbered 21 people, The sample size of this study sample size in this study, with estimates of the number of samples in each group, calculated by the following formula(5):

$$n = \frac{1}{1-f} \times \frac{2(Z\alpha + Z\beta)^2 \cdot SD^2}{Xc - Xt^2} 1,25 \times \frac{(8,5849) \cdot (50,438)}{(158,760)}$$

$$n = 1,25 \times 5,455$$

$$n = 6,819$$

$$n = 7 \text{ Responden}$$

So minimal sample in this study were 7 samples for each group, and to anticipate the occurrence of dropouts during the study researchers took a sample of 18 samples to be divided into two parts. 10 for the treatment group and the remaining 8 for the control group.This study uses Consecutive Sampling (Sequential). Data were analyzed using SPSS 21 by paired sample t-test with significance $\alpha = 0.05$ and independent sample T-test with significance $\alpha = 0:01$

3. Result and Discussion

1. General Data

This general data presents the results obtained about the general characteristics of respondents including the type of fluid therapy, length of treatment and respondent phlebitis score at Unipdu Medika Hospital in Jombang

Table 1. Percentage Distribution of Respondents in the Treatment Groups by Type Fluid Therapy in Unipdu Medika Hospital Jombang, on May 19th till June 10th, 2015

No.	Type of Liquid Therapy	Frequency	Presentage (%)
1	D5%	8	80.0
2	NaCl 45%	1	10.0
3	RL+D5%	1	10.0
Total		10	100

Source: Primary Data

Based on Tabel 1, above shows that respondents most treatment groups with fluid therapy RL + D5% (60%) and with fluid therapy and NaCl45% D5% respectively (20%). While the control group of respondents mostly with fluid therapy RL + D5% (62%) and the lowest is to D5% (13%).

Tabel 2. Percentage Distribution of Respondents in the Treatment Groups by how long Care in Unipdu Medika Hospital Jombang, on May 19th till June 10th, 2015

No.	Treatment Time	Frequency	Presentage (%)
1	1-3 Days	3	30.0
2	4-8 Days	6	60.0
3	7-12 Days	1	10.0
Jumlah		10	100

Source: Primary Data

Based on Tabel 2, above shows that the majority of respondents to the treatment group with treatment duration 4-8 days (60%) and least with treatment duration of 7-12 days (10%). Whereas for most of the control group with treatment duration of 4-6 and 7-12 days with the percentage of each (37%).

Tabel 3. Percentage Distribution of Respondents in the Treatment Groups by Phlebitis Score in Unipdu Medika Hospital Jombang, on May 19th till June 10th, 2015

Score	Phlebitis Score	Frequency	Presentage (%)
0	No signs of phlebitis	0	0.0
1	Possibly first signs	3	30.0
2	Early stage of phlebitis	3	30.0
3	Medium stage of phlebitis	3	30.0
4	Start of trombophlebitis	1	10.0
5	Advanced stage trombophlebitis	0	0.0
Jumlah		10	100

Source: Primary Data

Based on Tabel 3 above shows that respondents to the treatment group had the same percentage between early signs of phlebitis, phlebitis early stage, moderate stage and advanced stage phlebitis phlebitis (30%). As for the control group respondents with early and moderate stages of phlebitis have a percentage amount (37%) and least with phlebitis of advanced stage (26%).

2. Special Data

Some text. This special data presents the results obtained about the effect of propolis compresses on decreasing phlebitis scores at Unipdu Medika Hospital in Jombang.

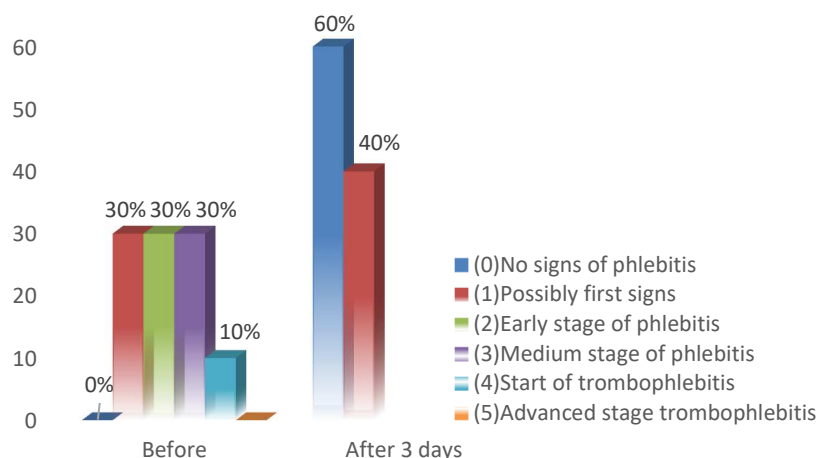


Chart Diagram 1. Percentage Difference Score Phlebitis Before and After Treatment In Treatment Groups Unipdu Medika Hospital in Jombang, on May 19th till June 10th 2015

Based on chart diagram 1, percentage difference score phlebitis before and after compress propolis above shows the score phlebitis respondent before action compresses propolis are in the early signs of phlebitis, an early stage of phlebitis, stage of moderate phlebitis with the percentage of each (30%) and respondents with at least advanced stage of phlebitis (10%). The results of observations on the third day giving compress propolis obtain significant results are shown in the graph no phlebitis as much (60%) and there are scores of phlebitis 1 or early signs of phlebitis (40%), but no longer have the early stages, moderate and advanced phlebitis, The decline in scores before and after treatment phlebitis compress propolis has decreased significantly, which in paired samples T-test probability values obtained ($\alpha = 0.05$).

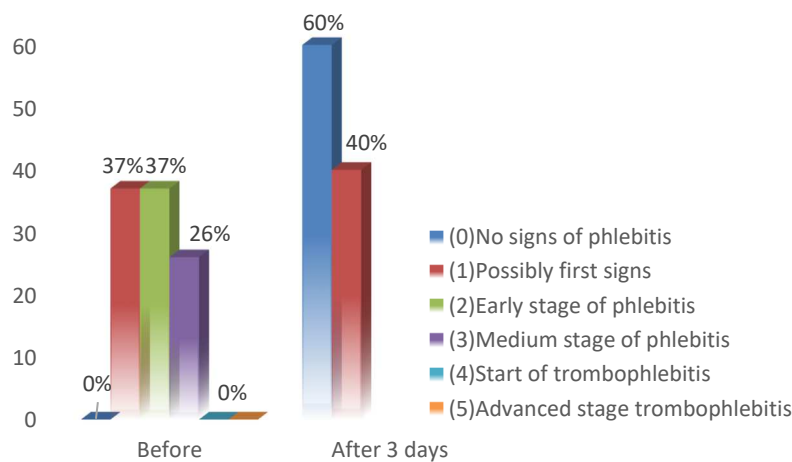


Chart Diagram 2. Percentage Difference Score Phlebitis Before and After Treatment In Control Groups Unipdu Medika Hospital in Jombang, on May 19th till June 10th 2015

Based on chart diagram 2, difference in scores phlebitis before and after treatment in the control group at the top shows that the score of phlebitis before action hot compresses highest are in the early signs of phlebitis and the early stages of phlebitis with the percentage of each (37%), and lowest in stage moderate phlebitis (26%). The results of the third day of observation in the control group obtained a percentage of early signs of phlebitis and early stage phlebitis each has a percentage (50%). Decrease phlebitis scores before and after applying warm compresses to the control group had a significant decrease, which in paired samples T-test probability values obtained (0.004) is much smaller than standard significant ($\alpha = 0.05$).

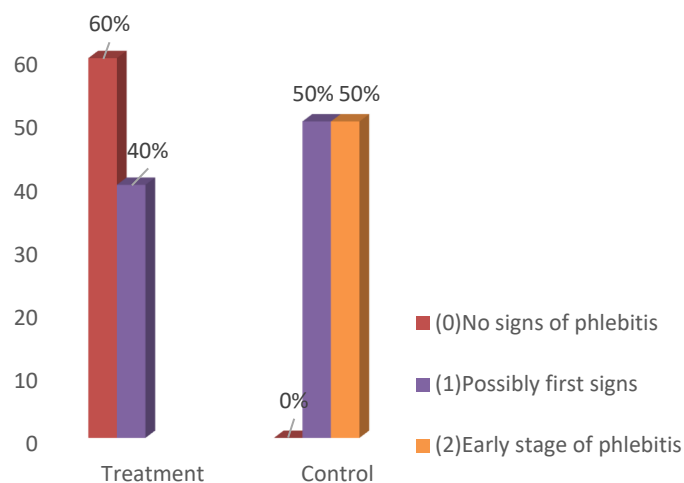


Chart Diagram 3. Percentage The Effect of compression of propolis on decreasing phlebitis scores at Unipdu Medika Hospital Jombang, May 19 to June 10, 2015.

Based on chart diagram 3, the compressive influence of propolis on the decline in phlebitis score above shows the difference in high enough phlebitis scores. The treatment group had the highest percentage with a score of 0 or no phlebitis (60%) and the lowest with early signs of phlebitis (40%). The control group has the same percentage between early signs of phlebitis and the early stages of phlebitis, respectively (50%).

Effect of propolis compress to decrease score phlebitis have significant value, namely the independent test samples T-test probability values obtained (0,000) is much smaller than standard significant ($\alpha = 0.01$).

Compress propolis can affect a decrease in score phlebitis this is due to the effects of a warm compress can help vasodilation of blood vessels to improve blood circulation in the blood vessels that experienced phlebitis. Warm compresses can provide a sense of comfort and eliminate factors that trigger inflammation such as histamine and bradykinin. Besides, the propolis with the flavonoid and quercetin in the liquid warm compresses it will have no effect on the enzyme lipooksigenase and cyclooxygenase which will issue a prostaglandin and neutrofil, kedunya is a major mediator of inflammation, so that the compress propolis is more effective than therapy warm compresses because the two processes in the healing of phlebitis.

According to Perry & Potter states that a warm compress can be used in the treatment of pain and inflammation because it will enlarge the blood vessels (vasodilation) and will increase the supply of blood throughout the body, so that it can eliminate the factors that cause inflammation such as histamine and bradykinin. CAPE existing content of the flavonoids and quercetin could affect siklooksiginase track. Both of these compounds are equally serve to obstruct the path lipooksiginase and sikloosignase.(9)

Propolis is usually presented in a liquid form and often in use in mix with warm water to a certain temperature and with a certain dose, usually depending on the disease and age.(10) Compress when applied on the skin surface, the dominant effect of the fluid will act to soften due to diffusion of the liquid into a foreign term located above the surface of the skin; a small portion will be evaporated.(2) And compounds present in the fluid can compress evaporated, then the active compound bound to the coating that is passed as the epidermis and dermis. In certain circumstances compress liquid preparations can carry the active ingredients to penetrate the hypodermic. Meanwhile, the active ingredient in topical preparations will be absorbed by the vascular skin to the dermis and hypodermis. (11)

4 Conclusion

Based on the purpose of research and discussion, it can be concluded that the effect of propolis compress the decrease score phlebitis, in getting as follows:

1. Results observation phlebitis score before action compresses propolis had significant differences with phlebitis score after action compresses propolis
2. Observed during the three-day provision of propolis compress show a decline in scores phlebitis each treatment and the occurrence of a very significant reduction on the third day or eight hours to six treatments propolis compress.

This is in line with warm compresses can increase comfort, reduce pain and as a mediator to bring the active compounds to penetrate the layers of skin hypodermis. The content of propolis in the fluid compresses will release the active compounds flavonoids and quercetin which have anti-inflammatory effects, into the area of inflammatory through the processes as most stocks topical that penetrates hypodermic, flavonoids absorbed by veskuler skin to the dermis and hypodermis thus providing stimulation to the enzyme sykolosignase and lipoksignase to stop expenditure neutropil hormones and prostaglandins which is the main mediator of the inflammation. The results can be affected by several factors such as the type of fluid treatment duration and the level of compliance, but these factors outside of the control in this study.

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